Senate Doc. No. 2.

REPORT OF COMMISSIONER
TO ATTEND THE
UNIVERSAL EXPOSITION
OF 1867,
AT
PARIS, FRANCE.

BY ORDER OF THE LEGISLATURE OF VERMONT,
OCTOBER SESSION, 1867.

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IN SENATE, October 15th, 1867.

On the motion of Senator BARSTOW, the Report of the Commissioner to the Universal Exposition at Paris, Was

Ordered to lie, and the Secretary directed to procure the printing of one thousand copies for the use of the General Assembly.

HENRY CLARK, *Secretary*.

REPORT OF COMMISSIONER
TO ATTEND THE
UNIVERSAL EXPOSITION,
AT PARIS, FRANCE.

TO HIS EXCELLENCY, HON. JOHN B. PAGE.

Having been commissioned to attend the Universal Exposition at Paris, in pursuance of a Joint Resolution of the Legislature of the State of Vermont, I would most respectfully submit the following report :

On the 18th day of March last, I arrived in Paris. I had seen on paper the ground plan of the Exhibition building and its surroundings in the "Park," and had also been made acquainted with "dates assigned to divers operations of the Exposition," * by the Imperial Commission, from which I learned the following was a part of the programme :

"Before December 1st, 1866, finishing the Palace and buildings in the Park.

From January 15th to March 10th, 1867, receiving and unpacking goods in the Exposition.

From March 11th to March 28th, 1867, arranging the goods in the spaces ascribed for them.

* Official Correspondence, pp. 13 and 14.

March 29th and 30th, general cleaning of all parts of the Palace and Park.

March 31st, inspection of the whole Exposition.

April 1st, opening of the Exposition.

October 31st, 1867, closing of the Exposition."

From the foregoing, it was reasonable to conclude that the Palace was completed, and the articles for exhibition were being placed "in the spaces ascribed for them." But, in this, I was disappointed. The spaces for the reception of articles were not ready; for the building was unfinished. The rainy weather that had prevailed for a long time had retarded the work, rusted the machinery and water-soaked the unpacked boxes that were exposed to it. Pits were being dug for the reception of machinery foundations; trenches cut for gas and water pipes; buildings, unique in form, were being erected around the main building and thousands of laborers were employed in the various departments of the exhibition grounds.

Every civilized nation on earth had sent thither a contribution of its products. With these products, there also came some of the people. It seemed like another Babel. With the great confusion of tongues, there was also a confusion of every thing else. Much had been begun, but nothing completed. It was evident, however, that when the plans of the Imperial Commission were fully consummated, that the Exposition would exceed, in magnitude, any thing of the kind ever before attempted.

I sought for the American Department and found it in the same unfinished condition that obtained in other portions of the "Champ de Mars." Indeed, it seemed further from completion than the departments of most other nations.

In the main exhibition building, the space allotted to

the United States, was three thousand nine hundred and forty-four metres, about one-sixteenth of the space allotted to France, and less than one-fifth of what was assigned to exhibitors from Great Britain. In addition to this space, there was a shed or Annex, so called, erected several rods from the main building, in which many articles from the United States were exhibited. This shed was three hundred feet in length and thirty-three feet wide.

The main exhibition Palace is a high one story building, in the form of a broad ellipse with a garden in the centre. In this garden are tastefully arranged beds of flowering shrubs and plants, fountains, statues and a circular building in which are exhibited suites of coins, weights and measures from the civilized nations of the earth. From this garden, sixteen avenues radiate to the circumference of the building. Each of these avenues were named after some nation or province. Belgium, Austria, Switzerland, Prussia, and other nations had the avenue alongside of their contributions named after them, but not so with the United States. There is "Avenue d'Europe" and "Rue d'Russia," but there is no "Avenue d'Amerique," nor is there "Rue des Etats Unis." The American citizen who would examine the contributions from the United States must travel in "Rue d'Afrique."

The building is also traversed by circular avenues that run parallel to its walls, crossing the radiating aisles at right angles. These divide the exhibits into seven groups that are arranged parallel to the walls of the building, and extend entirely around it in the following order, beginning at the inner wall :

1st. Works of Art.

2d. Materials and applications of the liberal arts.

3d. Furniture and other household articles.

4th. Clothing—including cloths—and other wearing apparel.

5th. Mining, rough and wrought products.

6th. Instruments and processes of the mechanic arts.

7th. Food, fresh and preserved, in various states.

Group I, embraces works of Art, and is subdivided into six classes, as follows: In the first division are the relics of ancient races, consisting of stone hatchets, spear and arrow points, also implements and weapons of bronze, and native copper from every nation in Europe, as well as from the mounds, tumuli and fields of America. In this division was afforded an excellent opportunity for studying and instituting comparisons between these interesting mementoes of races long since passed away. The most abundant supply was from the lacustrine deposits of Europe. Nearly every lake in Switzerland, Austria and Germany, and the bodies of water around Denmark were represented in this collection. A significant fact in this connection should be stated. In dredging these bodies of water to obtain these relics, it is found that the first or topmost articles are usually made of iron. Penetrating the mud still deeper, bronze or copper implements are found. Below these the relics are all of stone, some of which are nicely wrought into axes, hatchets, gouges, chisels, &c., not unlike those found in portions of the United States.

In addition to these, there are also found the charred remains of what appear to have been piles, upon which stood the habitations of these ancient races. Fragments of fishing nets, ornamental articles, and even samples of different kinds of grain, preserved by the anti-septic property of the peat in which they are found, were exhibited in this collection. The best contributions from

the United States, in this division, were from Missouri and Wisconsin.

The next class in this group includes paintings in oil. Then follow : drawings and crayon work ; sculpture and engravings on medals ; architectural designs and models ; and lastly, engravings and lithographs. A large space was allotted to the exhibition of these articles.

In the first three classes, including paintings, drawings and statuary, American contributors furnished ninety-four exhibits, including seven specimens of sculpture. Of the latter, there was a bust of President Lincoln, by Volk of Chicago ; "The Sleeping Faun," by Miss Hosmer, formerly of Massachusetts, and a spirited statue in bronze of "The Indian and his Dog," by Ward of New York,—to be placed in Central Park.

Among the paintings, were Church's "Niagara," and "The rainy season in the Tropics ;" Bierstadt's "Rocky Mountains ;" Beard's "Bears' Dance ;" Colman's "View of the Alhambra ;" Gignoux's "Mount Washington ;" a full length portrait of Lieut. General Sherman by Healy, and Hubbard's "View of the Adirondacs, taken near Mt. Mansfield."

Of all the contributions of paintings and statuary, only one—Church's Niagara—was noticed by the judges in making their awards. This received a silver medal. In these classes there was much to compete with. In France alone, there were one thousand four hundred and sixty-six contributions of paintings and statuary ; eight hundred and ninety-one of architectural designs and models, and one thousand and forty-three of engravings and lithographs. The exhibits in these classes from the other nations of Europe, were numerous and in many instances splendid. The American portion of the fine arts gallery

seemed empty when compared with the European departments. Those were crowded and often contained masterpieces of art. Upon the canvas were displayed groups of life-like figures that faithfully manifested the emotions of joy, sorrow, pride and anger, obedient to the will of the artist, and in the numerous statues grouped alongside the aisles, grace and beauty were made to shine forth from the inanimate marble.

To the class including architectural designs and models, there were no contributions from the United States. Five contributions of steel engravings and etchings were made, but no premiums awarded them.

The second group was sub-divided into eight classes. Class six embraced typography, engravings and lithographs. Of these there were twenty contributions, of which four received medals. The first—a silver medal, was awarded to Dr. S. G. Howe, Director of the Perkins Institute for the Blind, Boston, for books with raised letters for the use of the blind. A bronze medal was also awarded to each of the three following companies: H. O. Houghton & Co., Riverside Cambridge, Mass., for illustrated books; G. Merriam & Co., Springfield, Mass., for pictorial edition of Webster's Dictionary, and Appleton & Co., New York, for American Encyclopedia. The National Bank Note Company and the American Bank Note Company, New York, had specimens of work from each of their establishments, but notwithstanding the contributions were of the style of our national currency, which is acknowledged to be of a nicer finish than the bank notes of England or those on the Continent, yet no notice was taken of them in the awards of the juries.

Class seven of this group embraced stationery, book-binding and materials used in printing and design-

ing. Eleven contributions were made by Americans, and six bronze medals awarded as follows : W. F. Murphy & Sons, Philadelphia, for samples of blank-books ; Jessup & Moore, Philadelphia, for specimens of paper made from wood, straw and hemp. Secombe Manufacturing Co., New York, for Holt's Improved Ribbon Hand Stamp ; A. G. Day, Seymour, Ct., for ordinary and indelible Pencils in hard rubber cases ; Fairchild & Co., New York, for Gold Pens and Pencil Cases ; American Lead Pencil Co., New York, for samples of Lead Pencils.

In class eight there was but one contribution from the United States, and that received no notice from the judges. It was a group of statuettes. In the next class, embracing articles pertaining to Photography, there were ten contributions, and three prizes awarded, as follows : to L. M. Rutherford, New York, for Photographic Views of the Moon, &c., silver medal ; to S. Beer of New York, a bronze medal was awarded for Stereoscopic Views, and a favorable mention was made of the Camera Tubes and Lenses, of Willard & Co., New York.

The tenth class of the second group embraced musical instruments, of which there were nine contributions from the United States, and five medals awarded. Messrs. Chickering & Son of Boston, had awarded to them for their Pianos a gold medal and the Cross of the Legion of Honor. Messrs. Steinway & Sons, New York, had a gold medal awarded for their Pianos ; Mason & Hamlin, of Boston, for their Cabinet Organs, a silver medal ; G. Gemunder, New York, had a bronze medal awarded him for the stringed instruments which he exhibited, and the Schreiber Cornet Manufacturing Co., New York, a bronze medal for wind instruments of brass and German silver.

In the next class, including apparatus and instruments of the medical art, there were nineteen contributions, and nine prizes awarded to Americans, as follows: to S. S. White, Philadelphia, for Dentists furniture, instruments and artificial teeth, a gold medal; Johnson & Lund, Philadelphia, a bronze medal for artifical teeth, and honorable mentions were made of artificial teeth contributed by J. Allen & Son, New York, and some made on a new plan by S. S. Stockton, of Philadelphia. C. Abbey & Son, of Philadelphia, also had awarded them a gold medal for Dentists' gold foil; J. K. Barnes, Surgeon General U. S. Army, Washington, had a silver medal awarded him for his contribution of plans of Field Hospitals, surgical instruments and hospital apparatus of the United States Army; Cumming & Son had a bronze medal awarded for Hospital Car; honorable mentions were also made of instruments to cure stammering, by R. Bates of Philadelphia, and of artificial limbs contributed by W. Selpho & Son, New York.

In the twelfth class of this group, including instruments of precision and apparatus for instruction in sciences, there were eleven contributions and eight prizes awarded. A. D. Bache—late Superintendent of the United States Coast Survey—had a grand prize awarded him for his contributions of nautical charts and apparatus, deep sea thermometer and gauging instruments, which he contributed. William Bond & Son, Boston, exhibited an astronomical clock and chronographer, for which they received a silver medal; R. F. Towles, Canastota, New Jersey, exhibited microscope and telescope glasses, for which they were awarded a silver medal; W. Wales, Fort Lee, New Jersey, exhibited microscopic object glasses, for which he received a silver medal. Messrs. Darling,

Brown & Sharpe, Providence, Rhode Island, graduated rules, squares and gauges, for which they received a silver medal. M. Barlow, Lexington, Ky., exhibited a Planetarium, by which were shown the comparative velocities and motions of the earth and the inferior planets, for which he was awarded a bronze medal. Honorable mentions were made of an improved sextant, contributed by G. Davidson, United States Coast Survey, Washington, and an instrument called a Hydrodeik, for indicating the amount of moisture in the atmosphere, by W. Edson, Boston.

In the last class of this group, including geography, cosmography, apparatus, maps, charts, &c., there were five contributions from Americans and two medals awarded, as follows: to A. J. Johnson, a native of Mt. Holly, Vt., now of New York city, a bronze medal, for his new illustrated family atlas; J. Schelder, Hudson city, New Jersey, was awarded a bronze medal, for terrestrial globes which he contributed.

Group III, embraced furniture and other objects used in dwellings, and was subdivided into thirteen classes.

The first of these, (class fourteen,) embraced rich furniture. There were nine contributions in this class from the United States and but one was noticed. That was an honorable mention, of a table inlaid with various colored woods in mosaic style, by Peter Glass of Barton, Wisconsin.

The fifteenth class had but one contribution from the United States, and that received no notice from the jury. It consisted of three chimney pieces manufactured from American marble: one was of California marble, a beautiful variety of amber-colored statagmite, usually called

oriental alabaster; another was of Tennessee marble, and the third was of a spotless white marble, from West Rutland, Vt. They were contributed by John Shuster of Brooklyn, New York. Very few articles in the American department received more attention from visitors than these splendidly wrought mantles.

In the sixteenth class, which embraced rich glassware and glazing, there were five contributions, and only one medal awarded. This was a bronze medal to J. B. Lyon & Co., Pittsburgh, Pa., for pressed glassware.

A contributor to this class had much to compete with. France alone had seventy-two contributors, Belgium had thirty-nine, and Austria forty-one. It were folly for an American to think of successfully competing with the beautiful mirrors of France, the stained glass of Belgium, and the brilliantly colored glass of Bohemia. The annual product of glass in France is estimated at a value of fifteen millions of dollars.

In the seventeenth class, embracing porcelain, earthen ware and other fancy pottery, there were two contributions from the United States, but no medals were awarded. France had, in this class, ninety-six contributions, England had sixteen, Turkey thirty-eight, and Italy had twenty-one. The contributions, in this class, from these and other countries of Europe were splendid, and formed one of the most showy departments in the exhibition. The annual products of porcelain alone, in France, amounts to over four millions of dollars.

In the eighteenth class, including carpets, tapestry, and furniture stuffs, France had sixty-three contributors, and Turkey had two hundred and sixty. Tapestry carpetings were exhibited upon which were shown, by means of interwoven fabrics of different colors, landscapes and

figures as life-like as those painted on canvas, and exhibited in the picture gallery. In the manufacture of fabrics for upholstery, France is justly celebrated. American contributors wisely declined entering the field to compete with these, but Wisner H. Townsend of New York, ventured to contribute specimens of oil cloth, for which he received the award of a bronze medal; G. W. Chipman & Co., of Boston, also contributed specimens of carpet lining, of which an honorable mention was made. These were the only contributions to this class from the United States.

In the nineteenth class of this group there were four contributions of paper hangings from the United States, only one of which received an honorable mention. That was from Howell & Brothers, Philadelphia.

In the twentieth class which embraced cutlery, France had a rich display from sixty-three contributors. From the United States there were two small contributions, but they were not noticed by the judges in making their awards.

In the twenty-first class which embraced gold and silver plate, France had thirty, Turkey forty-six, England thirty-four and the United States two contributions. The one from Tiffany & Co., New York, was awarded a bronze medal. The annual value of the productions in this class in France, is over eight millions of dollars. The display at the exposition from the European nations was magnificent.

Bronze and other artistic castings were included in class twenty-two of this group. The art of working bronze extends back beyond the date of written history in Europe. Every European city of importance is adorned with ornaments of this material; even the lamp

posts in Paris are made of bronze. Our government sent to Munich to obtain the bronze doors for our new Capitol. It was a dangerous field for an American competitor to enter. Only one made the attempt. The Tucker Manufacturing Company of Boston made a contribution of iron castings that were bronzed by a new process and so closely resembled the real article and were so tastefully designed and finished that a bronze medal was awarded for the contribution.

Class twenty-three included clock and watch work. France had two hundred and twenty-six contributions; Switzerland two hundred and twenty-one, and the United States two. S. Fournier of New Orleans, exhibited an electric clock, for which he received a silver medal and the New Haven Clock Company sent over several "Yankee clocks," of which an honorable mention was made.

In class twenty-four, which included apparatus for heating and lighting dwellings, there were twelve contributions from the United States, only one of which received a medal. That was a bronze medal for the "Peerless" cooking stove, contributed by Pratt & Wentworth, of Boston, Mass.

Class twenty-five included perfumery. The atmosphere was made fragrant with the perfume that arose from the numerous fountains of cologne water and other highly scented cosmetics in the department of France and other European countries. Only two contributions were from the United States. R. & G. A. Wright of Philadelphia, contributed samples of Toilet Soap and perfumery, and were awarded a bronze medal. Honorable mention was also made of a contribution of perfumery from Tolleman & Collins of Janesville, Wisconsin.

Fancy articles and toys were included in class twenty-

six. France had ninety-three contributions in this class, Algeria twenty-nine, Austria seventy-nine, Italy twenty-eight, Turkey one hundred and fifty-two, and the United States six. Of these six, only one got an honorable mention—Meerschaum Pipes, contributed by Kaldenberg & Son, New York.

Group IV included clothing and other objects worn on the person, and was sub-divided into thirteen classes.

Class twenty-seven included yarn and tissues of cotton. In this class France had two hundred and twenty-eight contributions, Belgium sixty-nine, Prussia forty-seven, Switzerland fifty-five, Turkey one hundred and ninety-eight, and the United states only six. But all of these were favorably noticed by the jury. The New York Mills, New York, contributed fine muslins, for which they received a silver medal. The Clark Thread Company of Newark, New Jersey, contributed cottons and cotton thread, and received a silver medal. The Hadley Company, Holyoke, Mass., exhibited spool cotton, and received a bronze medal. The Webster Woolen Mills, Webster, Mass., were awarded a bronze medal for Jaconets and cotton fabrics. Honorable mention was also made of contributions of cotton fabrics from the Bell Factory, Huntsville, Ala., and also the Washington Mills, Boston, Mass.

Class twenty-eight included yarn and tissues of linen and hemp. France had one hundred and twenty-nine contributions in this class, Belgium ninety, Prussia sixty-nine, Italy forty-nine, and the United States only two. Neither of these won prizes.

In class twenty-nine, which included combed wool, worsted yarn and fabrics, the United States made no contributions, but France had one hundred and ninety-eight, and Turkey sixty-three.

In class thirty, which included yarn and fabrics of carded Wool, there were six contributions from the United States, one hundred and twenty from France, forty-eight from Belgium, one hundred and thirty-nine, from Prussia, and one hundred and seven from Great Britain. J. L. Hayes, Secretary National Association of Wool Manufacturers, Boston, was awarded a silver medal for series of Woolen Fabrics, manufactured by the Washington Mills. Webster Woolen Mills, Webster, Mass., were awarded a silver medal, for Broadcloths and Doeskins. H. Steersberg, New York, was awarded a bronze medal for Beaver Cloth. Mission Woolen Mills, San Francisco, Cal., were awarded a bronze medal for Woolen goods.

The thirty-first class included silk and silk tissues. The two hundred and fifty-seven contributions of France alone made a splendid display. Italy contributed from one hundred and forty-four exhibitors and Turkey had two hundred and twenty-three contributions. But one contribution was made from the United States. That was silk twist for sewing machines, from the Williams' Silk Manufacturing Company, and it received an honorable mention from the jury.

The thirty-second class, including shawls, had but one contribution from the United States, and that was unnoticed in the awards.

The thirty-third class embraced laces, embroidery and trimmings. Among the innumerable contributions from the European nations, none appeared in this class from the United States.

In the next class which included hosiery, linen and other articles of under clothing, there were two contributions from the United States, both of which were unsuccessful.

Class thirty-five included clothing for men, women and children. Ten contributions were from the United States. E. C. Burt, New York, contributed machine sewed Boots and Shoes, for which he received a silver medal. Honorable mention was also made of a sample of Spring Overcoat, contributed by W. O. Linthicum, New York.

In class thirty-six there were no contributions to compete with the grand display of jewelry and ornaments from the European nations.

In class thirty-seven, which included portable arms, the United States made fourteen contributions, and six silver medals were awarded. In addition to these, a gold medal was awarded to these manufacturers of fire arms collectively, in consideration of the superior finish and excellent arrangement for rapidly loading them. The Windsor Manufacturing Company, Windsor, Vt., contributed specimens of Ball's Patent Repeating Fire Arms, and received a silver medal therefor. The other successful competitors were E. Remington & Son, Illion, N. Y.; Spencer Repeating Rifle Company, Boston, Mass.; Smith & Wesson, Springfield, Mass.; Colt's Fire Arms Manufacturing Company, Hartford, Ct., and Providence Tool Company, Providence, R. I.

Class thirty-eight included articles for travelling and for encampment. To this the United States sent six unsuccessful contributions.

The last class of this group embraced toys and gewgaws. Amid the numerous contributions in this class from Europe, only one appeared from the United States and that passed unnoticed.

Group V embraced products of mines and metallurgy, also some products of the forests and farm, and was subdivided into seven classes.

In class thirty-nine every nation of Europe was represented, not only with samples of ores and manufactured articles, but many of them had models of their mines and geological maps and sections of the region in which they were located. France had three hundred and forty-nine contributions, Algeria thirty-three, Belgium one hundred and four, Prussia five hundred and fifteen, Bavaria twenty-five, Austria one hundred and ninety-two, Switzerland fourteen, Spain one hundred and eighty-three, Portugal thirty-nine, Greece seventy-eight; Sweden ninety-seven, Norway nineteen, Russia ninety-one, Italy two hundred and sixty-two, Turkey two hundred and ten, Great Britain one hundred and thirty-seven. British Colonies and Dependencies one hundred and fifty-four, and the United States sixty-eight. For these, prizes were awarded as follows: A silver medal to the state of Illinois for collection of minerals and fossils from that state. A silver medal was awarded to Chester Iron Co., Chester Mass., for emery and other minerals. To Dr. C. T. Jackson of Boston, a bronze medal was awarded in consideration of the service which he had rendered in bringing out the discovery of emery in Chester, Mass. A silver medal was awarded to J. B. Pigne, San Francisco, for collection of minerals from California. A silver medal was also awarded to the state of Michigan, for samples of its ores. A bronze medal was awarded to Wisconsin for a similar contribution. Honorable mention was made of a contribution of Mica, by J. Gould. Park Brothers & Co., New York, for cast iron edge tools, received a silver medal. Warner & Co., New Haven, Conn., received a bronze medal for Malleable Iron castings, and honorable mention was made of horse shoes made by Goodenough Horse Shoe Co., New York.

J. P. Whitney, of Boston, was awarded a gold medal for Silver Ores and Minerals, from Colorado; W. P. Blake, of San Francisco, Cal., was awarded a silver medal for Mineral products from California; and the State of Pennsylvania, a bronze medal for sample of Anthracite Coal. Honorable mentions were made of a contribution of Minerals and Fossils, by J. H. Jackson, New York, and of Ores and Metals contributed by J. Wharton, Philadelphia. The Douglass Axe Manufacturing Company, Boston, received a silver medal for Edge Tools; E. D. Brigham, received a bronze one; and one was also awarded to Douglass Manufacturing Company, New York, for Edge Tools; and honorable mentions were made of House Furnishing Hardware, contributed by Lalance and Grosjean, New York, and of Skates made by G. J. McCormick, Meriden, Ct. W. D. Walbridge, of New York, was awarded a gold medal for samples of Gold, Silver, Tin and Copper, from Idaho; and S. H. Randall, of New York, was awarded a bronze medal for samples of Feldspar, Beryl and Quartz. For Ingot and Sheet Copper, the Baltimore and Cuba Smelting and Mining Company received a bronze medal.

Class forty-one of this group embraced products of the forest. From the United States there were twelve contributions, consisting of specimens of wood and prepared peat, of which four honorable mentions were made.

Class forty-two embraced products of hunting, fishing, &c. In this class there were six contributions from the United States, of which one—a contribution from Gunther & Son, New York, of stuffed animals—was awarded a bronze medal.

Class forty-three embraced agricultural products (not used for food) of easy preservation. Twenty-four contri-

butions were sent from the United States, of which sixteen drew premiums, as follows: Victor Meyer, of Concordia, La., and L. Trager, Black Hawk Point, La., were each awarded a gold medal for samples of Cotton. The Illinois Central Railroad was awarded a silver medal for samples of Hemp, Flax, Cotton and Tobacco. A. Delpit & Co., New Orleans, La., were awarded a silver medal for Snuff and Smoking Tobacco. C. H. Lilienthal, New York; J. W. Carroll, Lynchburg, Va.; T. C. Williams & Co., Danville, Va.; A. Tamboury, St. James, La.; J. C. Humphres, Rapids, La.; J. R. Sarrazin, New Orleans, La.; State of Wisconsin; L. B. Hotchkiss, Phelps, New York, and R. Richards, had each a bronze medal awarded for samples of Tobacco, Cotton, Wool, &c.

Honorable mentions were made of contributions of the same, from F. Cozzans, New York, E. Bourgeois, New Orleans, La., and the State of Alabama.

The forty-fourth class of this group included Chemical and Pharmaceutical Products. From the United States there were thirty-four contributions, for eleven of which medals were awarded. France had three hundred and forty contributions, Algeria fifty-one, Belgium eighty-five, Prussia one hundred and thirty-four, Austria one hundred and fifty, and Italy one hundred and ninety-nine. The Glen Cove Starch Manufacturing Company, New York, received a silver medal for Corn Starch; and one was also awarded to F. S. Pease, Buffalo, N. Y., for illuminating and lubricating Oils. The Brandon Kaolin and Paint Company, Brandon, Vt., was awarded a bronze medal for a contribution of Native Paints and Kaolin. Bronze medals were also awarded to A. G. Seymour, Conn., for samples of hard and soft India Rubber; R. M. Smith, Baltimore, Md., for refined burning and lubri-

cating Oils; Marietta and Gales Fork Petroleum Company for crude lubricating Petroleum; Belmont Oil Company, Philadelphia, for refined Petroleum, Benzine and Paraffine; J. Hirsch, Chicago, for Glycerine, Albumen, &c.; A. Fries, Cincinnati, O., for Oils, Ethers and flavoring Extracts; F. & C. Holliday, New York, for Dyes made from aniline, pigments and colors, and J. F. Babcock, Boston, for Rosin Oil.

The forty-fifth class embraced specimens of the chemical methods of bleaching, dyeing and calico printing. Only one specimen was sent from the United States, and that was unsuccessful.

To the forty-sixth class, embracing Leather and Skins, the United States sent ten contributions, France eighty-four, and Italy one hundred and twenty-one. Honorable mention was made of but two contributions — C. Korn, New York, for Calf Skins, and D. J. Lrowne, Roxbury, Mass., for Enamelled Leather, manufactured by a new process.

Group VI included Apparatus and Processes used in the common arts, and was subdivided into twenty classes.

Class forty-seventh included apparatus and processes of Mining and Metallurgy. There were four exhibits in this class from the United States, one hundred and one from France, and thirty-four from Prussia. One from Rutland, Vt., the Steam Stone Cutting Machine, contributed by the Steam Stone Cutter Company, was awarded the highest prize—a silver medal. A bronze medal was awarded H. Haupt, of Philadelphia, for Steam Drill Tunnelling Machine.

The forty-eighth class included Implements of Agriculture, &c. The display of agricultural implements from the United States was not large, but the exhibits were very

creditable in appearance, and were duly appreciated by those who witnessed their operation. As usual, the reapers and mowers were proved to be superior to those of any other nation. A very severe test was made, on the 23d of May, at Bilancourt, an island on the Seine, at which time, in a very severe rain storm, three American Mowers — Wood's, McCormick's and Perry's — beat all the other mowers brought in competition with them. Every French and English machine *broke down*, and left the field assigned them uncompleted. It should be said, in this connection, that the field selected was a very hard one for mowing. It was rough, stony, thick matted at the bottom with fine grass, and in it an abundance of weeds. In addition to all these, there were mole-hills all over the island. The grit from these, together with the stone and grass, made wet by the rain, proved too much for every machine except those from the United States.

For some reason or other, another trial of mowers was agreed upon, and the trial came off in July at the time the trial of reapers was made. I left France before this trial, but from a letter received from John P. Reynolds, Esq., of Springfield, Illinois,—one of the jury—I am able to give the following results:—On Mowers, the first prize, a gold medal, was awarded to Walter A. Wood, Hoosick Falls, N. Y. The second, a silver medal, to J. G. Perry, of Kingston, R. I. The third, a bronze medal, to C. H. McCormick, Chicago, Ill. An honorable mention was made of a mower, made by Samuelson & Co., of England,—a machine that broke down at the first trial.

On two horse reaping machines, C. H. McCormick, of Chicago, was awarded the first prize, a gold medal. Seymour, Morgan & Allen, New York, the second prize,

a silver medal; and Walter A. Wood, of Hoosick Falls, N. Y., the third prize, a bronze medal; and an honorable mention was made of Wood's endless Chain-rake Machine of Massey, of Canada.

These trials of machines at Bilancourt were of much interest and value to the American exhibitors.

Collins & Co., New York, exhibited steel plows, for which they were awarded a silver medal. Deere & Co., Moline, Ill., also had steel plows, for which they received a bronze medal. The Partridge Fork Works, Leominster, Mo., exhibited Hay Forks and Rakes, for which they received a bronze medal.

Some of the articles exhibited were ahead of the times in Europe, and hence were not suitably appreciated. For example; Palmer's Horse Pitchfork would not be of much use in a country where barns are unknown as they are in most parts of Europe, nor would the merits of J. B. Seymour's Corn Planter be apparent to a people who never plant corn, as is the case in nearly all the country north of the latitude of Lyons, in Europe.

A. J. Fullam, of Springfield, Vt., sent to the exhibition a machine for shearing Sheep, directed to the care of N. M. Beckwith, Commissioner General for United States, but I was not aware that such an article had been sent and did not chance to see the box that contained it. I think the box was never opened, if it ever arrived in Paris. This is the only exhibit from Vermont that was not unboxed and put in its place "on time."

The next class included sporting implements, in which but one contribution was made and that was unnoticed.

In the fiftieth class, which included materials and methods of agricultural works and of alimentary industry, D. H. Goodell, of Antrim, N. H., received a bronze medal for the Lightning Apple Parer, contributed by him. Honorable mentions were also made of a Dough Kneeding Machine, exhibited by J. R. Baker, St. Louis, Mo.; a Flour and Sauce Sifter and Egg Beater, by H. Tilden, Boston; Cracker, Bread and Cake Machinery, by S. T. Bacon, Boston; Doty's Clothes Washer and the Universal Clothes Wringer, by R. C. Browning, New York; also, a Washing Machine and Clothes Wringer, by J. Ward & Co., New York, and a Carpet Sweeper, by G. J. Purrington, New York.

In class fifty-one, which included chemical, pharmaceutical and tanning apparatus, there were large displays from the European nations, but only three exhibits were from the United States, one of which—Shultz & Warker's Soda Fountain and Apparatus, from New York—drew a silver medal.

In class fifty-two, which included boilers and engines specially adapted to the requirements of the exhibition, no contributions were from the United States. The engine used for moving the machinery in the American department was of French manufacture, and so were the boilers.

In the fifty-third class, including machines and mechanical apparatus in general, there were twelve exhibits from the United States that drew prizes.

The first was a splendidly finished Steam Engine, from the Corliss Steam Engine Company, Providence, R. I., for which a gold medal was awarded. E. & T. Fairbanks, of St. Johnsbury, Vermont, exhibited a large collection of Platform Scales, Counter Scales and

Balances, and also a large dormant Railroad Scale. For these contributions a silver medal was awarded.

The Howe Scale Company, of Brandon, Vt., exhibited a large platform scale and some small ones. In the absence of Mr. Howe, who was unable to attend in consequence of the decease of his father, I presented to the jury the superiority claimed for the Howe Scales over all others. I informed them that the improvements consisted in the greater simplicity of arrangement, greater protection to the bearings or knife edges by the ball motion, and the superior arrangement of the levers by which all necessity of a deep pit was avoided. For these the company was awarded a bronze medal.

P. M. & F. M. Roots, Connersville, Ind., exhibited a Rotary Blower, for which they received a bronze medal; a bronze medal was also awarded for the Beddle Boiler. Pickering & Davis, New York, exhibited Marine and Stationary Engine Regulators, for which they received a bronze medal. L. H. Olmstead, Stamford, Conn., exhibited a Friction Clutch Pulley and self-feeding Ratchet Drill, for which he was awarded a bronze medal. Morris, Tasker & Co., Philadelphia, Pa., exhibited Pipe Cutting Machines, and were awarded a bronze medal. W. & B. Douglas, Middletown, Ct., exhibited Metallic Pumps of various patterns, a curious article, that would force water to run up hill called a Hydraulic Ram, and a portable force pump called an Aquarium, useful for various purposes, as a garden engine, a fire engine, window washer, insect destroyer, &c.; for these the company were awarded a bronze medal. J. B. Root, New York, exhibited Root's Trunk Engine, and received a bronze medal. Philander Shaw, Boston, exhibited a Hot Air Engine, for which he was awarded a bronze medal.

In the fifty-fourth class, which included machine tools, American contributors were awarded eight medals—as follows :

W. Sellers & Co., Philadelphia, Pa., were awarded a gold medal for Machine Tools, including a huge Iron, Planer. Brown & Sharpe, Providence, R. I., were awarded a silver medal for Revolving Head Screw Machine and Milling Machine. Bement & Dougherty, Philadelphia, were awarded a silver medal for Bolt and Nut Threading Machine, with open dies. A silver medal was also awarded to Cool, Ferguson & Co., Glens Falls, N. Y., for Barrel Machine. Isaac Gregg, of Philadelphia, exhibited Brick Machine, and had the same in operation and also had samples of bricks; for these contributions he received a silver and also a bronze medal. P. S. Justice, Philadelphia, had a Power Hammer, for which he was awarded a bronze medal. D. L. Harris & Co., Springfield, Mass., exhibited an Improved Engine Lathe, with Van Horne's Patent Tool Elevator and Screw Cutter, and a bronze medal was awarded.

In the fifty-fifth class of this group, only one successful contribution was made—a Cotton Gin, exhibited by the Southern Cotton Gin Company, Bridgewater, Mass.

In class fifty-six, which included apparatus and methods of weaving, there were five contributions, three of which won medals :—M. Oppen, New York, exhibited a Corset Loom, for which he received a silver medal. G. Crampton, Worcester, Mass., was awarded a silver medal for Loom for fancy Woolen Cassimeres. For Mestizo Burring Picker, a bronze medal was awarded to C. L. Goddard, Bowling Green, New York.

In class fifty-seven, there were eighteen exhibits from the United States, thirteen of which were sewing machines.

Sewing and knitting machines, hat, cap, boots and shoe making machines, were in this class.

I was greatly disappointed to find so many contributors of sewing machines from Europeans. There were nineteen manufactories of sewing machines or sewing and button hole machines in France, represented; eleven from England, three from Belgium, seven from Prussia, two from Hesse, two from Baden, three from Austria, two from Switzerland, one from Denmark, and two from Italy. Although they were imitations of and embodied the same general features as the American machines, yet they were quite unlike them in finish. They were much heavier and did not appear to do the work as well.

As far as I could discover, the American machines all were in the hands of good operators and did their work well. Several of the proprietors claim to have received the first premium. I give it as my opinion that the working was so nearly alike and so good on many of them, that the jury was unable to discriminate difference enough in them to determine which was best and, therefore, gave to what they considered the best, gold medals; silver ones to the next, and so on.

To Wheeler & Wilson and to Elias Howe, Jr., were awarded gold medals. To Elias Howe, Jr., was also awarded the grand cross of the Legion of Honor. To the American Button-hole Company, Philadelphia, the Florence Sewing Machine Company, New York, and to the Weed Sewing Machine Company, New York, were awarded silver medals. Bronze medals were awarded to the Union Button-hole and Embroidery Company, Boston, to A. B. Howe, New York, and to Bartram & Fanton Manufacturing Company, Danbury, Conn. Honorable mention was made of a machine exhibited by the Empire

Sewing Machine, New York. I. W. Lamb, Rochester, N. Y., exhibited his Knitting Machine, and was awarded a silver medal. C. A. Shaw, Biddeford, Me., was awarded a bronze medal for Knitting Machine. Mumfort, Foster & Co., Detroit, Mich., exhibited Boot Trees and Lasts, for which they were awarded a bronze medal.

Class fifty-eight included apparatus and processes used in the manufacture of Furniture, and other objects for dwellings. C. B. Rogers & Co., Winchenden, Mass., contributed Wood Working Machines, and were awarded therefor a gold medal. B. D. Whitney, of Winchendon, Mass., received a silver medal for Wood Working Machines, such as Lathes for chair stock, Circular Saws, &c. Honorable mention was made of a Serpentine Wood Moulding Machine, exhibited by J. B. Winslow, New York.

Class fifty-nine embraced such apparatus as is used for making, stamping, printing and coloring paper. Degener & Weiler, New York, exhibited a Printing Press, and were awarded a bronze medal. One was also awarded to J. E. Sweet, Syracuse, N. Y., for Composing Machine.

Four contributions were made to class sixty, which embraced divers machines not included in the other classes. P. Welsh, formerly of Brandon, Vt., now of New York, exhibited a machine for Dressing Printing Types, for which he received a gold medal. Hoglen & Graflin, Dayton, O., had a Tobacco Cutting Machine, for which they received a bronze medal. Wickersham Nail Company, Boston, exhibited Nail Cutting Machine, and a bronze medal was awarded.

Class sixty-one included carriages, carts, &c. Wood Bros., New York, exhibited Phaeton and Buggy, and

were awarded a silver medal. J. Hall & Son, New York, had a top Buggy, and received a bronze medal. Honorable mention was made of Street Railway Car, contributed by J. Stephenson, New York.

In class sixty-two, harness and saddlery work, an honorable mention was made of ladies and gentlemen's Saddles, contributed by C. Wellman, New York.

In class sixty-three were embraced all articles pertaining to railroads. A splendidly finished Locomotive and Tender, from Grant's Locomotive Works Patterson, N. J., was exhibited, for which a gold medal was awarded. E. & T. Fairbanks & Co., St. Johnsbury, Vt., exhibited their Platform Railroad Scale, and were awarded a bronze medal.

In class sixty-four, which included telegraphing, and all matters pertaining to it, two grand prizes were awarded to citizens of the United States. One was bestowed upon Cyrus W. Field, through whose indefatigable labors the Atlantic Cable was laid, and the other was awarded to David E. Hughes, of New York, for the service which he rendered the world by the introduction of the Printing Telegraph.

In class sixty-five were included materials and methods adapted to civil engineering, public works and architecture. The Board of Public Works of Chicago, Ill., exhibited drawings of a Tunnel under Lake Michigan to obtain pure water for the city, and a silver medal was awarded. A silver medal was also awarded to Yale & Winn Manufacturing Company, Shelburne Falls, Mass., for Locks. Chapin & Wells were awarded a silver medal for model of Swing Bridge. Herring & Co., New York, were awarded a bronze medal for Fire Proof Safes. This award may have been altered since I left France. A chal-

lenge was made by Mr. Herring for any one to test safes with him, and, I understand, the challenge was accepted by the best safe manufacturer in England. The trial was made by subjecting the two safes to equal degrees of heat. The contents of Herring's were uninjured, but those in the English safe were ruined.

The sixty-sixth, or last class in this group, included navigation and salvage. C. L. Dabol, New London, Ct., exhibited a Fog Trumpet, operated with a hot air engine, for the use of vessels when sailing in dense fog. For this he was awarded a silver medal. J. B. VanDeusen, New York, was awarded a bronze medal for model of American yacht "Fleetwing." A bronze medal was also awarded to Brown & Level, New York, for Tackle for disengaging ship's boats. Honorable mention was made of Oars contributed by E. W. Page, New York.

Group VII included food in various conditions and states of preservation, and was subdivided into seven classes.

In class sixty-seven of this group, the Glen Cove Starch Manufacturing Co., New York, exhibited "Maizena," and the jury who examined it had "a proof of the pudding" that was made of it, and in consideration of its value in the culinary department awarded to it the highest prize in this department—a silver medal. The Department of Agriculture, at Washington, was awarded a bronze medal for contributions of Grains from several of the States. The States of Ohio, Illinois, Wisconsin, Minnesota, Iowa and Kansas had each a bronze medal awarded for contributions of Cereals. W. S. Carpenter, Harrison, N. Y., was awarded a bronze medal for Indian Corn in the ear.

In the next class, which included baking and pastry

cooking, there was but one contribution from the United States, and that not favorably noticed by the jury.

Class seventy included meat and fish. Seven contributions were made in this division, and six were favorably noticed.

C. Duffield, Chicago, Ill., was awarded a silver medal for Salt Cured and Smoked Hams. Culbertson, Blair & Co., Chicago, were awarded a silver medal for Packed Beef, Pork and Lard. Honorable mentions were made of Extracts of Beef, by Gail Borden, New York; Preserved Meat and Fish, by Portland Packing Company, Portland, Maine; Preserved Lobster, by Bray & Hayes, Boston; Canned Fish and Shell Fish, by Townsend Brothers, New York.

In class seventy-one were vegetables and fruit.

I. J. Squire, New London, Ct., exhibited Preserved Fruit and Vegetables, and was awarded a bronze medal. Honorable mentions were made of Preserved Fruits contributed by J. Waltemeyer, and Preserved Meat by the Oneida Community, Oneida, N. Y.

In class seventy-two, which embraced condiments and stimulants, sugar and confectionery,—there were fifteen contributions from the United States, and extensive contributions from every European nation.

Walter Baker & Co., Dorchester, Mass., contributed samples of Cocoa and Chocolate, and were awarded a silver medal. H. Lawrence, Louisiana, exhibited samples of sugar, and was awarded a silver medal. B. Johnson, Louisiana, was awarded a bronze medal for sugar. Honorable mentions were also made of Refined Yellow Sugar, by J. Davidson, Louisiana; Hermetically Sealed Fruit in Syrup, by C. C. Williams, New York; Sugar, by G. Sabatier, Louisiana; and Salt, by D. D. Avery, New Orleans,

Class seventy-three included fermented drinks. McP. & D. Smith, New York, contributed Ale, Beer and Porter, and were awarded a bronze medal. Honorable mentions were also made of Wines of the following parties: W. F. Anderson (for Longworth's), Cincinnati, O.; Pleasant Valley Wine Company, Hammondsport, N. Y.; M. Werk, Cincinnati, O.; Chas. Bottler; American Wine Company, St. Louis, Mo.; and Buena Vista Vinicultural Society, Sonora, Cal. This completes the enumeration of exhibits in the first seven groups; those that properly belonged in the main exhibition building.

Outside of the main building were three other groups, which I will briefly notice:

The first (Group VIII) included agricultural buildings and live stock, such as Horses, Mules, Sheep, Goats, Pigs, Poultry, Sporting and Watch Dogs; useful insects, such as Bees, Silkworms, also Fish, Crustacea, Molusca, &c. There was not a large display of these from any country, and none were sent from the United States.

Group IX included living vegetable productions and horticultural appurtenances, such as hot houses, flowers, ornamental and fruit trees, seeds, hot house plants, &c. These were in a reserved garden outside of the main building. Good taste was displayed in the arrangement of everything in the garden and grounds throughout the Park. Many useful hints were given on the manner of treating fruit trees, &c. The trees that were transplanted (and some ornamental trees were transplanted that were a foot in diameter,) were invariably well braced or supported when set out, to prevent being moved by wind so as to have their roots injured. In addition to this, the bodies were usually bound in straw or in some way sheltered from the rays of the sun that otherwise would

dry up the sap as it attempted to ascend the body of the tree. Instead of having the trees "trimmed up" so as to make long bodies, they were usually "cut back" so as to have very short ones. The fruit was so near the ground as to be within reach. In many instances peaches, cherries and pears were trained up to the south side of walls, and appeared more like a grape vine than a tree. This training is practiced much in Europe, and affords fruit in localities north of where the trees would not grow if they stood out unprotected. In the hot houses and gardens in the park, the flowering plants and shrubs were generally full of blossoms—fuller than I ever saw similar plants before. I found this increase of flowers was occasioned by "cutting back" the plants before the buds were set.

In group X were exhibited articles, the special object of which was, to improve the physical and moral condition of the people. This group was divided into seven classes.

The eighty-ninth class included School Houses and apparatus used in the instruction of children. France had in this department two hundred and fifteen contributions, Spain one hundred and twenty-five, Switzerland twelve, Prussia eleven, and the United States *one*. This was a specimen of a Western Primary School House, built by the State of Illinois. Like everything else in the American department, this was sadly behind hand in its completion, and was not finished till after the juries had made their examinations, and was therefore unnoticed by them.

Class ninety included libraries, apparatus used in the instruction of adults at home, in the work shop, schools, etc. France made three hundred and eighty-seven con-

tributions to this class, and the United States made two. The United States Sanitary Commission was awarded a grand prize, a gold medal, and honorable mention was made of the colony at Vineland, New Jersey.

Class ninety-one included furniture, clothing, etc., combining useful qualities with cheapness. A grand prize was awarded Mr. Chapin, of the Pacific Mills, Lawrence, Mass., for Cotton Cloth, made at that great establishment. This must be very gratifying to the successful rival who had to compete with numerous exhibits from Europe, there being five hundred and twenty-two contributions from France, alone.

Class ninety two embraced specimens of clothing worn by the people of different countries. In the cities and provinces of Europe, the people, generally, have some peculiarity in their costumes that distinguish them from people of other cities or provinces. Even in the small cantons of Switzerland the people of no two are dressed alike. And the same is true in the provinces of France. No one who ever saw a peasant woman from Normandy, with her tall, curiously shaped muslin cap would mistake her for a servant girl in Paris. The caps worn by the two are very unlike each other. It was to exhibit these various costumes, ornaments, etc., that this class was instituted.

Class ninety-three included dwellings characterized by cheapness, combined with the conditions necessary for health and comfort. Several of these exhibitions were in the park, and three were from the United States. The state of Illinois contributed a specimen of a western farmer's home. Flint & Hall, of Boston, Mass., sent a sectional building, in which Mr. Bacon, of Boston, had his bakery apparatus and oven. Edward Gottheil, New

Orleans, La., had a portable cottage made of Louisiana woods. All these were nicely finished buildings, but were completed too late to receive premiums.

Class ninety-four included articles of all kinds manufactured by skilled workmen. France had four hundred and eighty-six contributions, but there were none from America.

In the ninety-fifth, the last class, were included instruments and modes of work peculiar to skilled workmen. To this class we made no contributions.

This concludes the list of awards to parties from the United States. I supposed a full list of awards to all nations would be printed on the first of July, but in this I was disappointed. Instead of furnishing a list in the newspapers, or otherwise, as is usual in this country, the copy-right of the awards of the juries was sold by the Imperial Commission, and the list is to be published in a book and sold at a profit. This was not published when I left Paris. I am therefore unable to give the proportionate number of prizes awarded to the several nations.

From one who knew I learned, however, that the proportion of prizes awarded to contributors from the United States was greater than to those of any other country. It was not because American jurors decided it to be so, for, of the ninety-five juries only nine had Americans appointed for them. Of this number, I think, only a few served. There was not an American on any jury that examined contributions from Vermont. But few of the number could speak the English language.

It may be proper, in this place, to attempt to give some idea of the form of the building and the arrangement of the articles exhibited. I will illustrate it by supposing we take a pie baked on an oval shaped plate, and remove

from the center about one-eighth part of it—making the circumference of the open space parallel with the rim of the plate. This open space from which the portion of pie is removed represents the central garden. The remaining portion of the pie form a ground plan of the exhibition building. Now cut this pie into four pieces. The knife mark through the longest diameter represents Avenue d'Europe, the one making the shortest diameter is in place of Rue d'Russia, on one side of the central garden, and in place of Rue d'France on the other. Now divide these four quarters of the pie into four equal parts by making three cuts from the foci of the elliptical open space—representing the garden—to the outer rim of the pie, and you have a complete ground plan of the exhibition building, and the sixteen avenues running through it. The name of the avenue extends from the circumference of the building to the central garden. Upon the opposite side, the avenue had another name. Entering the exhibition on the side next to the Seine River by Avenue d'Europe, one first meets with articles in Group VII,—articles of food and drink. Continuing on he next enters the space allotted to the articles of Group VI.

This is a large department, and in it are the articles used in the common arts, including all kinds of machinery, engines, carriages, railway and telegraph apparatus, &c. If one would compare the machinery and manufactures of all nations, he should ascend the flight of steps to the road that is placed on iron frame work above the machinery, and walk entirely around the building, and look down upon both sides of him. Here he can see the machinery in motion, and discover the marked difference that exists between that of the several nations of the

earth, and can contrast the Loom of the Italian with the Crompton Loom from America. He will see in the French department people at work making hats, flowers, jewelry, boots and shoes. In the German department, toys of various kinds are made, and in nearly all the departments some work is being done. If the visitor turns to the right as he enters the exhibition via Avenue d'Europe, as I have indicated, he will first enter the department of Great Britain and Ireland. Proceeding on, he will enter the departments in the order they are named: Canada, Brazil and South American Countries, Mexico, Sandwich Islands, United States, Egypt and other African Nations, China, Siam, Japan, Persia, Turkey, Danube Principalities, Roman States, Italy, Russia, Norway, Sweden, Denmark, Greece, Portugal, Spain, Switzerland, Austria, South Germany, North Germany, Prussia, Belgium, and then comes France, which extends round to the place of beginning, and occupies nearly one half of the entire building.

I have said that one could compare the machinery of the various nations by pursuing the course pointed out. But this was not true in every instance. The *place* for the machinery was in the main building, and most nations had it there. But unfortunately for some of the exhibitors from the United States, they were unable to exhibit their machinery in the main building, but were obliged to put it out into a shed—called an *Annex*, notwithstanding it was several rods from the main building. Perhaps it was necessary that some of the articles should have been put there, but there was no necessity for putting so much in that shed. What seemed to me the most outrageous, was to place there all the American Sewing Machines and the beautiful Locomotive Engine from Grant's Works, Patterson, N. J., especially as they were

needed in the main building to fill the space which was unoccupied. Exhibitors petitioned Mr. Beckwith, the Commissioner General, to have these machines put into their proper place. Those who had space in the main building generously offered to give it up and go into the shed, in order to give room to the exhibitors of the Sewing Machines if it were necessary. But the obstinacy which marked the course of this man Beckwith, would not permit him to yield to the petitions that were made. He had the power to keep them there, and seemed determined to do it, and did do it. In every Avenue in the Exhibition building, except Rue d'Afrique that run along side the American department, there were exhibits placed at intervals along the aisles, some having twenty or thirty articles in them. I asked Mr. Beckwith if he would not permit Mr. Grant to place his Locomotive in Rue d'Afrique as I thought there was ample space for it. He replied that he thought the Imperial Commission would not allow it to be put there, but *personally* he would be willing to have it there, and would do what he could to get the Imperial Commission to let it be moved. I had received assurances that the Imperial Commission would grant any reasonable request that the United States Commissioner might make, and fully believed that the Locomotive could be moved if he asked for it. Fearing he might not do so, unless there was something to urge him on, I drew a petition to the Imperial Commission asking its removal, and obtained the signatures of a large number of the American Exhibitors, and handed it to Mr. Beckwith and solicited his endorsement. He seemed perfectly satisfied with the petition, and kindly (?) offered to endorse it and go and deliver it in person to the Commission, and ask them to grant our request. What he

said to the Imperial Commission, I am not prepared to state, but will merely give what he *wrote*, as I have a copy, which is as follows:

“Copy.”

“1st May, 1867.

“SIR:—I have the honor to enclose herewith a letter addressed to you by a number of highly respectable exhibitors in the section of the United States, asking permission to install the Locomotive and tender of Mr. Grant in the Rue d’Afrique, within the Palace of the Exposition.”

“I am aware that an installation of this kind is not in accordance with the general plan, but if for the reasons assigned the Imperial Commission should be willing to make an exception in this case, it would be highly gratifying to the applicants.

“With great respect,

“I am your obedient servant,

[Signed.]

“N. M. BECKWITH,

“U. S. Com’r. Gen’l.”

“MONSIEUR CONSEILLER D’ETAT,

“Commissaire General de l’Exposition Universelle.”

Any one can judge by the above letter how strongly he plead for the American exhibitors. Observe the quibbling disapproval suggested in the sentence: “I am aware that an installation of this kind is not in accordance with the general plan.” Now the “general plan,” as the Imperial Commission and Mr. Beckwith well knew, was to have all the machinery in the very portion of the main building that we petitioned for. Mr. Grant applied early for the space and it was assigned to him in the main building. After having had the space assigned

him, and he had taken his locomotive to Paris, paying all the expense of transportation, amounting to over one thousand dollars in gold, (for he did not ask or desire the Government to ship it for him,) it seemed unkind for those in authority to compel him to leave that space and go out into a shed and exhibit his locomotive. I might cite other instances where Mr. Beckwith made himself obnoxious to exhibitors, and apparently elugged the wheels of American interests in this great race of nations, but I decline doing so. His course seemed very strange. I was then, and am still, unable to form an opinion why he acted as he did. Mr. Reynolds, the Commissioner for Illinois in a letter to the Chicago Tribune, dated April 27th, seemed as much puzzled to account for his strange conduct as I am. He says: "Mr. Beckwith is either a regular dolt, without the slightest executive ability or experience in matters of this sort, or he is un-American in his whole feelings and character." I fully concur in the above opinion, and am inclined to think his absence from America, and residing in Paris as he has during the last twenty years has had the effect to dissipate his love and respect for our institutions, if he ever had any. His appointment to the high office which he held was, in my opinion, very unfortunate for the interests of the American exhibitors, and the results following his inefficient operations made it anything but agreeable for Americans who visited the exhibition during the earlier stages of its existence. But in spite of all the obstacles that were presented, the American contributors were eminently successful in securing prizes. The whole number awarded to all countries was five thousand. The number of contributors was over forty thousand, thus making the average about one prize to eight exhibitors. From the

United States there were seven hundred and seventy-eight applications for space, but only five hundred and twenty-four had their articles on exhibition. Of this number two hundred and sixty-eight received prizes, as follows: Five grand prizes, seventeen gold medals, sixty-two silver medals, one hundred and four bronze, and eighty honorable mentions. Of this number six were for parties in Vermont—three silver and three bronze medals.

A few additional honorable mentions were made and bronze medals were awarded to some parties that had no entries on the list of exhibitors. I am unable to tell why they were awarded; for example, A. J. House and A. H. House, were each awarded a bronze medal. I understand they are the manufacturers of a Sewing Machine and while they have a bronze medal awarded, the machine was deemed worthy of a gold one. Other prizes denominated "*Hors Concours*" were also awarded — three of them being to American citizens. One was to Dr. Barnes, Surgeon General, U. S. A., another to C. R. Goodwin, a manufacturer of Sewing Machines, and I have forgotten to whom the third was awarded.

One thing I wish to say which will redound to the credit of the exhibitors from America. It is this, that during the great contest for prizes no American citizen, so far as I have been made acquainted, descended to any trick, artifice or position unbecoming to a true christian gentleman. All seemed kind, courteous and gentlemanly. Long and pleasant will be the remembrance of the friendships formed with those I met there. The list of good men from the United States that attended that exhibition is a large one; and how nobly did they work together. Had every thing gone smoothly and the United States Commissioner General been the man for the place, it is

probable that the latent goodness of the exhibitors, United States and State Commissioners would not have shown forth in such brightness and beauty. Nor would so many acquaintances and strong attachments have been formed.

Those who have witnessed a railroad or steamboat accident know how readily strangers will suspend the cold formalities or etiquette usually observed by travellers and approach their fellow passengers and inquire of their welfare, or unite with them in thanks for a safe deliverance.

A similar feeling may have moved us. We felt that we were on a big ship, freighted heavily with our nation's reputation—a cargo that we were unwilling to have sink where all nations of the earth had assembled and would be witnesses. We had lost confidence in our captain, and as a natural result we, as passengers, became acquainted with each other.

I will narrate a circumstance illustrating the high-minded and honorable course that characterized most of the American exhibitors. Colonel J. T. Griffin, of Rochester, N. Y., who was the agent to exhibit McCormick's Reaper, had put up his machine in the best possible style and was daily expecting the first visit from the jury on Agricultural Implements. Near his machine was one from Seymour, Morgan & Allen's establishment New York, which was not put up, nor had an agent appeared to take charge of it. Some years since a suit was brought by C. H. McCormick against Seymour & Morgan for an infringement of his patent, and after a long, expensive and bitter law suit, a verdict was rendered in favor of the plaintiff for over twenty thousand dollars. It is hardly reasonable to suppose, under these circumstances, that a very strong feeling of friendship would naturally exist between these competitors. But Colonel Griffin

was a full grown, noble specimen of an American gentleman. He wanted all the articles from the United States exhibited, and each stand its chance for a prize. He therefore suggested to a friend that they take hold in the absence of the regular agent and put up the Seymour & Morgan machine, so that it should not be ruled out because it was not in place on time. They took hold and put up the machine as well as they could, and in two or three days after the agent arrived. In the great trial of Reapers, in July, the Seymour & Morgan machine was proved by its work to be second only to McCormick's.

Other instances of a similar nature might be cited, but this will suffice.

Before concluding this report I will make a few suggestions that may serve to answer the questions so commonly asked by Americans: Will it pay? And what good will result from the Great Exposition of 1867? In my judgment it will pay and good results will follow.

The old and new worlds are now brought so closely together by the improvements of the age and the commercial relations existing between them, that there seems to be a necessity for an uniform standard of currency, weights and measures. At present these are based on no, common standard. Our measures for a foot, yard, mile and gallon, are unlike those of the nations of Europe. Nor does our coinage correspond in value with theirs.

At the Universal Exposition, commissioners from various countries were in counsel, and all agreed upon the desirableness of adopting the metrical system.

This has already been done in France and some of the other nations of Europe. As early as 1799 a commission of scientific men in France had the matter under consideration. They were greatly perplexed in their attempts to find something permanent and absolute for

their unit of measure. They were unwilling to longer retain the unit measure of a foot—based on the average length of a human foot of an adult—and at last settled upon one deduced from the circumference of the earth. From careful measurements made of an arc of meridian, the distance from the equator to the poles of the earth was obtained, and this distance being divided by ten millions, gave the unit of measure which they adopted and which is now the standard measure in France. It is called *metre*, and has a length equal to thirty-nine and thirty-seven hundredths of our inches. The increase and decrease are in a ten fold ratio, forming *Dekametres*, *Hectometres* and *Kilometres*, or thousand metres; or in the descending series forming *Decimetre*, or tenth of a meter, *Centimetre*, *Millimetre*, etc. The unit of weight adopted was called a *gram*, and was deduced from the weight of water—one cubic *Decimeter* of distilled water being the standard. The decimal increase and diminution was observed in this as in measurements, and the prefixes *deka*, *hecto*, *kilo*, etc., being used for ten, one hundred, one thousand, etc., and the prefixes *deci*, *centi*, and *milli*—one-tenth, one-hundredth, and one-thousandth of a gram. Liquid and solid measure—with units called *liter* and *stere*—are multiplied decimally upward and divided decimally downwards. The same principle is observed in the French coinage. The franc is the unit coin of France. It has a value equivalent to about nineteen cents of our coinage. The franc is divided into one hundred parts, called *centimes*. Five of these are about equal to one of our cents. Five francs are equal to about ninety-five cents. The English shilling is equal to about twenty-four cents—four of them making ninety-six cents. The differences that exist between the values of the franc, the shilling and the dime or dollar, subject people

engaged in international commerce to great inconvenience.

It is the aim of those who have the matter in charge to have the French and American coins correspond in value, so that one hundred French centimes shall be just equal to two American dimes, or one fifth of a dollar. It is further proposed to have the English shilling made an aliquot part of a dollar.

I think the proposition was made and acceded to by our commissioners to reduce the value of our dollar to that of five francs, and one cent of our currency to correspond in value with five centimes or one sou of French currency. The reduction of the English shilling will be about one ninety-sixth part of its present value. The coins of other nations will be altered to correspond with these. When this is accomplished an uniform currency will extend over the civilized world. It is not difficult to perceive the advantages that will result from it. All men engaged in commercial pursuits will be benefitted. None but brokers will suffer in consequence of the change.

The advantages likely to follow the adoption of the metrical system of weights and measures are fully equal to those of the uniform decimal system of coinage. Apothecaries, grocers and goldsmiths will use the same standard weights; the milkman and the merchant will have the same sized vessels; the surveyor, the merchant, the astronomer and the mechanic, will use alike the same standard for measure, and the old tables of Troy, Apothecaries, and Avoirdupois weight, Milk and Wine measure, and the perplexing tables of long, square and cubic measure that lumbered up the Arithmetics of our school-boy days, and have bothered the business men in making their computations, will all be cast aside to give place to the more simple and sensible system based on decimal ratio.

Last year Congress passed a law permitting the adoption of the metrical system of weights and measures throughout the country. But this, like all great strides in human progress, requires time for its accomplishment. It will be opposed by "conservatives," or those who fear to depart from old and well beaten paths that were travelled by their fathers. They will be horrified at seeing the words Kilogram and Kilometre, and insist that the old way is the best. But the thoughtful mind, that is unwilling to reject the system merely because it is new, discovers in these long and new words a significance and much prefers them to the old nomenclature that embraced three distinct systems of weight, which were subdivided into ounces and pounds, all of which were unlike. How many business men are there that can readily tell the number of scruples Apothecaries weight, or the number of grains Troy weight, required to make a pound Avoirdupois? How difficult it is to make computations based on these arbitrary systems. And how easy is the task when the unit of weight is divided into tenths, hundredths and thousandths, or increased in the same proportion.

The school boy after having been puzzled with the examples in compound addition, subtraction, multiplication, division, and vulgar fractions, feels greatly relieved when he arrives at decimal fractions. It seems to him like returning to the simple, fundamental rules of his arithmetic. So it will be to the business man. Decimal fractions alone will be needed in his computations. Weights, measures, distances, superficies, solids and currency will alike be subdivided into tenths, hundredths, etc., and increased in the same ratio. The man who understands the first rules of arithmetic will be prepared to enter the store of the druggist, grocer, or merchant, and readily

make the computations necessary in the business. He will not be obliged to unlearn one system of weights to prepare him to use another. I consider this subject one of vital importance to the business interests of our country. This is my only apology for dwelling upon it so long.

If the deliberations and labor of those who had the matter in charge at Paris hasten the adoption of the metrical system of weights, measures and coinage throughout the civilized world, it will do much towards paying for the expense incurred by the great exposition of 1867.

Considered in its narrowest sense—in a pecuniary point of view—I am of the opinion that the sale of rights to manufacture machinery, the new avenues of trade that will be opened to American manufacturers, and the useful hints that our artists and artisans will acquire and bring home with them, will more than compensate for the aggregate expense incurred by American contributors. But it will pay in a nobler sense than this. The crowned heads of Europe have been brought together. They have contrasted the gew-gaws and splendid ornamental articles from their several nations with the unadorned but highly useful contributions from America. New and enlarged ideas have entered the minds of the monarchs and the people of the Old World. The Grand Sultan of Turkey and his aristocratic attendants must have learned some suggestive lessons as they traveled through the European nations and saw the grand epitome of all nations in the Great Exhibition. A few trips like this will make the Sultan more charitable towards those who do not endorse his peculiar religious views, and in time he may not fear to eat meat, even if the animals are slaughtered by a christian butcher. The useful articles in the American department were greatly admired by the semi-barbarous

as well as by the civilized people of Europe who saw them.

Turks, Greeks and Algerines learned lessons when viewing these contributions from America, that would have taken years of hard missionary labor to have taught. The people of Europe, Asia and Africa are sadly deficient in their knowledge of the useful arts. They, in many instances, seem to have sacrificed the useful for the sake of the ornamental. In Paris, the model city of Europe, and in many respects the model city of the World, the machinery and tools of its manufactures and artisans are of the rudest kind. Good articles for domestic use are equally scarce. I very much doubt whether there is a wash-tub, wash-board, washing machine or mop owned in the city of Paris. I never saw one there, except in the exhibition. Long boats, made at government expense, are on the river Seine, and in these boats are hundreds of washer-women daily at their labor. They "battle" their clothes on a smooth board or piece of plank that extends out from the side of the boat over the water. It seems never to have entered their minds that they could wash clothes by rubbing them on a corrugated surface faster than on a plain one. When floors are to be washed, women get down upon their knees, and scrub them with a wet floor cloth. Whether or not, the European Governments or the "Lords of creation," are fearful that the women will become too dignified and ultimately claim "rights" if they are permitted to forsake the kneeling posture and stand upright when they wash floors, I am unable to say, but one thing is certain. It is reserved for the women of Europe to do the meanest drudgery, and little interest for their welfare seems manifested by those who should be their protectors.

Very few of the contributions from America will be returned. They are wanted in Europe. Philanthropic individuals and associations will purchase them for the people's use. They will serve as leaven in the progress of humanity in the old World. The Swiss peasant who once uses the steel hay fork, sent over from Leominster, Mass., will never willingly abandon it for the wooden one which his father used. Great as is his reverence for old things, he will abandon them for new ones when he becomes convinced they are better than the old ones were. After he has made one step in the line of progress, even if it be only with his farming tools, he is the better prepared to take the second one. It is a peculiar trait of European character to adhere strenuously to old things. It is their desire, judging from appearances, to travel in old paths, whether of a political, religious, moral or agricultural nature. The man who dares forsake any of these is sure to be charged with disloyalty, heterodoxy and infidelity, or too visionary to succeed in agricultural employments.

But the American contributions, in the hands of those who, Garibaldi-like, seek for the future welfare of their race, will aid in elevating the people out of these degraded and narrow paths and place them upon a broader and more enduring basis. If this is done, it will fully compensate for the expense incurred by the American people. That such results will follow and that the people of both Europe and America will be benefitted and made better, wiser, and drawn nearer together through the influences of the Industrial Exhibition of 1867, is the candid belief of your humble servant,

ALBERT D. HAGER,

Commissioner for Vermont.

Montpelier, October 20th, 1867.